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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,991	04/02/2001	Hisae Shibuya	16869P023000	1340

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EXAMINER

TRAN, TRANG U

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 10/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,991

Applicant(s)

SHIBUYA ET AL.

Examiner

Trang U. Tran

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9, 14-22, 29 and 30 is/are allowed.
- 6) ☒ Claim(s) 10, 12, 13, 23 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 11 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 10, 13, 23 and 26-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishikawa (US Patent No. 6,333,627 B1).

In considering claim 10, Nishikawa discloses all the claimed subject matter, note 1) the claimed displaying a measurement pattern on a display surface of a color picture tube is met by the signal generator 4 which generates the specified pattern signal (dot pattern) for the measurement which is displayed on the color CRT 6 (Fig. 2, col. 8, lines 41-51), 2) the claimed obtaining a first image, by imaging said displayed measurement pattern under a first light intake condition using an imaging element is met by the frame image pick up by the CCD camera 31 (Fig. 8, col. 9, line 4 to col. 10, line 44), 3) the claimed obtaining a second image by imaging said displayed measurement pattern under a second light intake condition using said imaging element is met by the frame image pick up by the CCD camera 31 (Fig. 8, col. 9, line 4 to col. 10, line 44), 4) the claimed obtaining a third image having a wider dynamic range than images obtained through imaging with said imaging element by combining said first image and said

Art Unit: 2614

second image is met by the pixel data which having maximum light reception level is stored in RAM 24 by replaced (Fig. 8, col. 10, line 45 to col. 11, line 24), 5) the claimed measuring a discrete fluophor emission intensity distribution for said measurement pattern is met by the calculation of Fig. 9, col. 11, lines 25-54, 6) the claimed obtaining an electron beam intensity distribution using said measured discrete fluophor emission intensity distribution and said calculated data for said plurality of basic patterns is met by the measurement controller 5 (Fig. 10, col. 11, line 55 to col. 14, line 20), and 7) the claimed outputting information relating to said determined electron beam intensity distribution is met by the output correction data (Fig. 10, col. 11, line 55 to col. 14, line 20).

In considering claim 13, the claimed wherein said third image with said wide dynamic range provides noise separation in a range of about 1 % to about 100% of a maximum luminance of said image is met by the pixel data which having maximum light reception level is stored in RAM 24 by replaced (Fig. 8, col. 10, line 45 to col. 11, line 24).

Claim 23 is rejected for the same reason as discussed in claim 10.

Claim 26 is rejected for the same reason as discussed in claim 13.

Claim 27 is rejected for the same reason as discussed in claim 10 above, and further the claimed assembling a plurality of electrodes using an electron gun assembly process, using an electron gun sealing process, placing an electron gun assembled in said electron gun assembly process in a bulb, forming a vacuum, and sealing said bulb is met by the electron gun mount portion 613 (Fig. 2, col. 6, lines 49-67), and the

Art Unit: 2614

claimed assembling a deflector yoke onto said bulb and performing inspection and adjustment of image quality using an image quality inspection/adjustment process, said bulb assembled with said deflector yoke being sent to a next process when said image quality inspection/adjustment process is passed successfully is met by the deflection yoke 615 (Fig. 2, col. 6, line 49 to col. 7, line 43).

In considering claim 28, the claimed wherein if an irregularity is detected in quantitative evaluation of emission distribution in said image quality inspection/adjustment process, information relating to said irregularity is passed on to at least one of the following: said electron gun assembly process, said electron gun sealing process, and said image quality inspection/adjustment process is met by the deflection yoke 615 (Fig. 2, col. 6, line 49 to col. 7, line 43).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US Patent No. 6,333,627 B1).

In considering claim 12, Nishikawa discloses all the limitations of the instant invention as discussed in claim 10 above, except for providing the claimed wherein said second light intake condition is set so that, in said second image imaged under said second light intake conditions, images associated with areas having a brightness of no

Art Unit: 2614

more than about 1% of a maximum luminance from said first image are distinguishable from noise. Nishikawa also discloses the CCD camera 3 performs an exposure control in conformity with a desired shutter speed by controlling the electric charge storing time of the image pickup device 31 (Fig. 2, col. 6, lines 33-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the second image associated with areas having a brightness of no more than about 1% of a maximum luminance from said first image into Nishikawa's system since it merely selecting available component.

Claim 25 is rejected for the same reason as discussed in claim 12.

Allowable Subject Matter

5. Claims 1-9, 14-22 and 29-30 are allowed.
6. Claims 11 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The independent claims 1, 7, 14 and 20 directed to a method for evaluating a color picture tube. They identify the uniquely distinct features: "displaying on a display surface of a color picture tube a measurement pattern including a plurality of first patterns arranged at different positions relative to fluophor dots of said color picture tube and a plurality of second patterns near said first patterns and sufficiently large relative to said fluophor dots; obtaining a second image using said imaging element to image while controlling light intake to allow brightness components of no more than about 1% of maximum luminance from said first image to be separated from noise and imaged;

Art Unit: 2614

creating a third image by combining said first image and said second image while adjusting scales according to a light intake ratio; calculating, from said third image, display center positions of said plurality of first patterns using said second pattern positions". The closest prior art, Nishikawa (US Patent No. 6,333,627 B1), either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Webb et al. (US Patent No. 6,014,168) disclose screen mapping of a cathode ray tube.

Fujii et al. (US Patent No. 6,020,919) disclose image inspection system for inspecting quality elements of a display screen.

Hamaguri (US Patent No. 6,462,777 B1) discloses display characteristic measurement apparatus for a color display apparatus, and a method for calibrating the same.

Uno et al (US Patent No. 4,593,309) disclose method for convergence measurement for a color picture tube and an apparatus therefor.

Webb et al. (US Patent No. 5,896,170) disclose dynamic alignment of cathode ray tube rasters.

Art Unit: 2614

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Trang U. Tran** whose telephone number is **(703) 305-0090**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller**, can be reached at **(703) 305-4795**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

TT TT
September 15, 2003


MICHAEL H. LEE
PRIMARY EXAMINER